



Activity-based Costing (ABC) -- AMC Pilot

AMC PARC Conference

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Outline

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- 5. ABC POCs
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ABC Implementation

- **Purpose:** Implement Activity-based Costing (ABC) at TACOM. Acquisition Center also served as pilot for AMC business area of Contracting.
- **Objectives:**
 - To leverage resources based on ABC and Cost Management analysis and workload analysis
 - To assist in identification of cost to support our major customers
 - To develop cost performance measures
 - To identify potential areas to review for business process improvement studies



AMC Goals

- **Standard Activities categories to be used by all contracting groups**
 1. Plan Acquisition and solicit offers
 2. Evaluate offers and award PWD
 3. Administer Contracts
 4. Manage Acquisition Center
 5. Develop and Revitalize Workforce
 6. Other
- **Standard Cost Objects**
- **Weapon System Focus**
- **Replace Variable Cost to Procure**



ABC POCs, Contracting

- **AMC HQ - Harvey Mymit**
- **AMC Contracting - Karen Moser, Stephen Knight**
- **AMCOM - Debbie Childress, Brian Wood, Tom Mailey**
- **CECOM - Estelle Klose, Deborah Nowell**
- **OSC - Daniel Miller, Trudy Hallgren**
- **RMAC - Lance Davis, Angela Billups**
- **TACOM - Joan Moses**

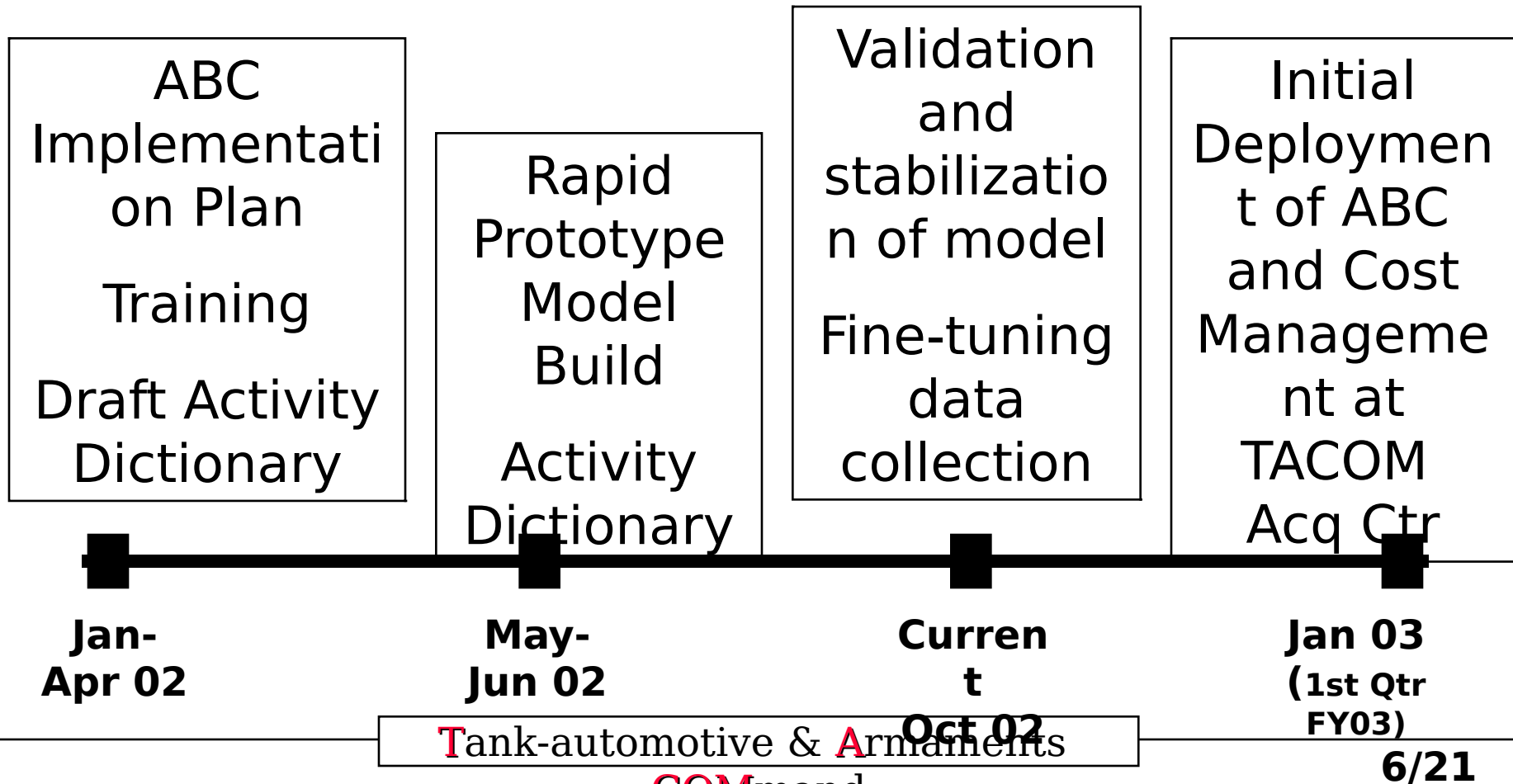


TACOM

Lethality, Survivability, Mobility and
Sustainment for America's Army

Leadership
Teaming
Communication
Employee Support
Strategic Thinking
Organizational Climate

TACOM Timeline





Current Actions

- Fine-tuning ABC model and data collection techniques
 - Automated data feeds from resource financial systems into OROS ABC software model
 - Automation of activity labor hour data collection
 - Development of standard “cost objects” in the model for “cost to buy” metrics
- Validation of ABC data
- Sharing ABC activity dictionary and ABC “lessons learned” with AMC and other MSCs



Lethality, Survivability, Mobility and
Sustainment for America's Army



Process-Oriented Approach

**Three Direct Mission Activities --
established sub-categories for five
unique process:**

1. Plan Acquisition and solicit offers
2. Evaluate offers and award PWD
3. Administer Contracts

Repair Parts
RE-1,2,3

Systems Acq
SY-1,2,3

R&D
RD-1,2,3

Installation
Support
IS-1,2,3

Nonstandard
Procurement (SNAP)
SN-1,2,3



Lethality, Survivability, Mobility and
Sustainment for America's Army



Indirect and Other Activities

4. Manage Acquisition Center

Maintain Procurement
Systems &
Infrastructure

Metrics & Process
Improvement

Sustain Business

Perform Management
& Admin Duties

5. Develop and Revitalize Workforce

Hiring and
workforce
development

Attend training

Conduct in-house
training

6. Other Mission Activities

Manage Industrial
Base

Comp Adv/
Ombudsman

PEO/PM Matrix
Support (Acquisition
Planning)

Other AMC and TACOM

Tank-automotive & Armaments mission activities

2. Resource Costs are “driven” to Workgroups

The screenshot shows the Oros Modeler software interface. On the left, a hierarchical tree structure lists resources under the 'Resource' folder. The 'Acquisition Center Divisions' folder is expanded, showing sub-items like 'Civilian Labor (Warren)', 'Military Labor Estimated', 'AMC Interns Estimated', 'DA Funded Position Es', 'Other (Warren - 7AC)', and 'Training (Warren - 7AC)'. The 'Civilian Labor (Warren)' item is selected. On the right, a table displays resource costs with columns: Name, ReferenceN, DriverQuantity, and ReferenceNumber. The table lists various divisions and their corresponding quantities. A callout box with an arrow pointing to the 'DriverQuantity' column contains the text: 'Full Time Equivalents (FTEs) are used to allocate labor costs'.

Name	ReferenceN	DriverQuantity	ReferenceNumber
R&D/Base/SNAP Contracting Div (Salaries)	WG-AQ-AB-CL	75.00	WG-AQ-AB-CL
Process Mgt Div (Salaries)	WG-AQ-AM-CL	75.33	WG-AQ-AM-CL
Deployment Support Div (Salaries)	WG-AQ-AD-CL	46.00	WG-AQ-AD-CL
Heavy Combat Div (Salaries)	WG-AQ-AH-CL	57.00	WG-AQ-AH-CL
Light Combat Div (Salaries)	WG-AQ-AL-CL	57.00	WG-AQ-AL-CL
Brigade Combat Team (Salaries)	WG-AQ-I-CL	14.00	WG-AQ-I-CL
Tactical Vehicle Div (Salaries)	WG-AQ-AT-CL	74.00	WG-AQ-AT-CL

Full Time Equivalents (FTEs) are used to allocate labor costs

3. Each workgroup estimates the amount of labor time spent doing activities (defined in dictionary)

Microsoft Excel - AQ-AD, 3rd Qtr, ABC.xls

File Edit View Insert Format Tools Data Window ABC Help

Arial10B I U

M10=

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P			
10	Sample Spreadsheet - Activity Hour Data Collection																		
11																			
12	Apr-Jun 02 (3rd QTR FY02)		SPARES FTEs>			16.4		R&D FTEs>			0.2		SYSTEMS FTEs>			21.8		MANAGE FTE	
13			TOTAL	Hours	Repair Parts Procurement (RE)			R&D Procurement (RD)			Systems Procurement (SY)			4. Manage Acquisition Cente					
14			EMPLOYEE	Attending															
15	Employee Name		HOURS	Training	1	2	3	1	2	3	1	2	3	1-SY-PM	4-1	4-2	4-3		
16	a		520	18			10%				2%	2%	4%			14%	48%		
17	b		520	2													63%		
18	c		520	0	38%		4%				1%		1%		10%	41%	1%		
19			0																
20	d		520	56							10%						79%		
				2	5%	5%	5%										85%		
				40	5%	5%	5%				45%	12%	20%						
				67							30%	17%	40%						
				26							40%	15%	40%						
				48	3%	3%	3%				31%	11%	40%						
				0															
				0							23%	28%	49%						
				21							37%	20%	39%						
				70							42%	12%	33%						
				47							30%	21%	40%						
				7							26%	22%	51%						
				12							35%	28%	35%						
				47							27%	19%	37%						
				0	20%	40%	20%												
				88	30%	33%	20%												
				20	33%	48%	15%												
				2	35%	45%	20%												
				198	27%	25%	10%												
40	t		520	0			100%												
41	m		520	0			100%												

BUYINGMilitary

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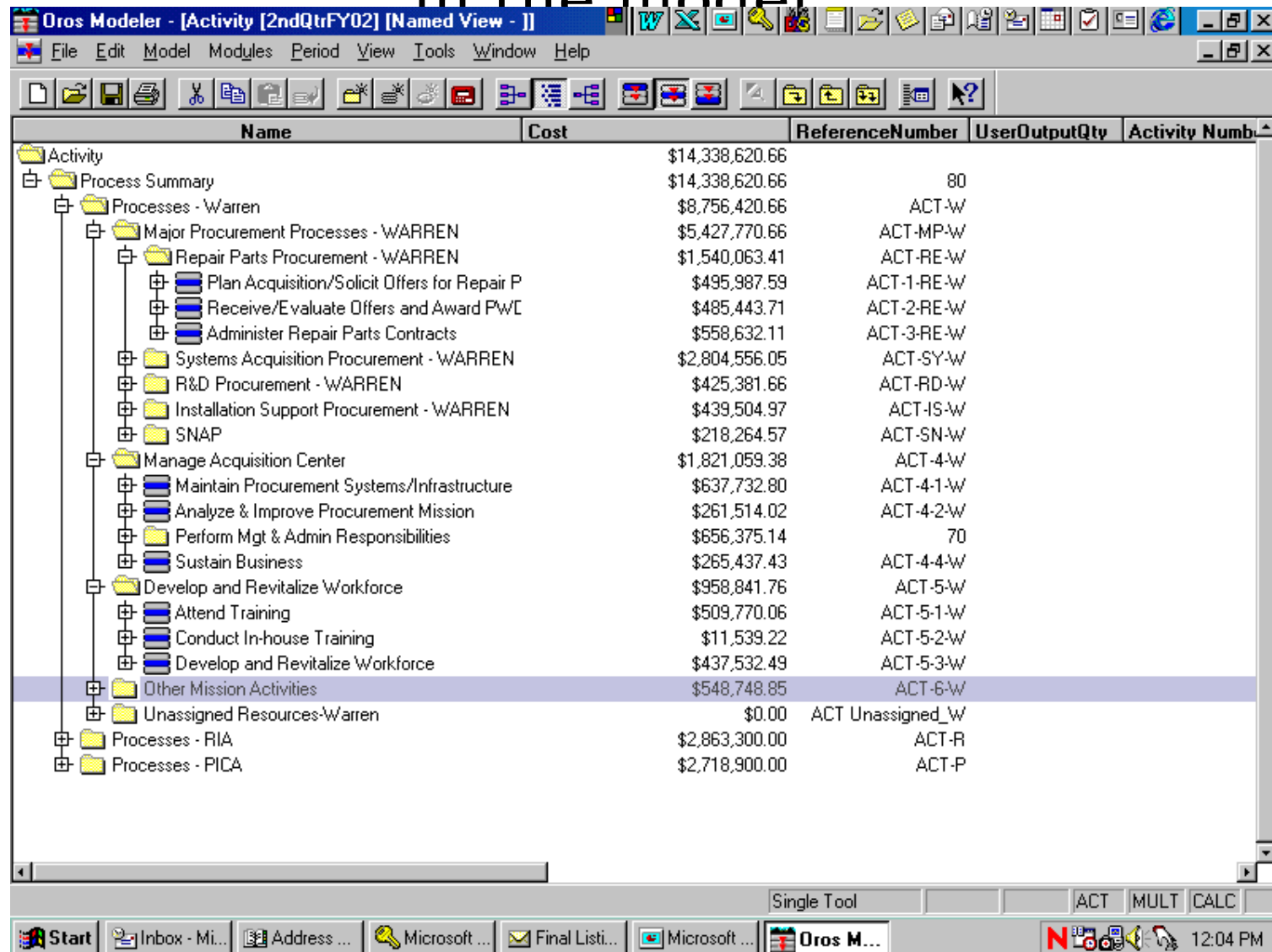
4. Workgroup Resource Costs are “driven” to the activities performed by each workgroup

The screenshot shows the Oros Modeler interface. On the left, a tree view displays the hierarchy of workgroups under 'Resource'. The 'Deployment Support Div' is selected, showing its sub-workgroups: 'Deployment Support Div (Salaries) FTEs', 'Deployment Support Div (Military) PERCENTAG', and 'Deployment Support Div (AMC Interns) PERCENTAG'. On the right, a table lists activities with their driver quantities and referencers. The first row is highlighted, showing 'Plan Acquisition/Solicit Offers for Repair P' with a driver quantity of 5.74 and referencer 'ACT-1-R'.

Name	DriverQuantity	Referer
Plan Acquisition/Solicit Offers for Repair P	5.74	ACT-1-R
Receive/Evaluate Offers and Award PWD	5.30	ACT-2-R
Administer Repair Parts Contracts	5.40	ACT-3-R
Plan/Solicit Systems Procurement	5.16	ACT-1-SY
Evaluate/Award Systems Procurement	6.17	ACT-2-SY
Administer Systems Contracts	10.19	ACT-3-SY
Plan/Solicit R&D Procurement	0.09	ACT-1-RD
Evaluate/Award R&D Procurement	0.04	ACT-2-RD
Administer R&D Contracts	0.15	ACT-3-RD
Maintain Procurement Systems/Infrastruct.	0.01	ACT-4-1Y
Analyze & Improve Procurement Mission	0.67	ACT-4-2Y
Perform Mgt & Admin Responsibilities	4.64	ACT-4-3Y
Sustain Business	0.19	ACT-4-4Y
Attend Training	1.92	ACT-5-1Y
Develop and Revitalize Workforce	2.71	ACT-5-3Y
Manage CBO/CBU	0.90	ACT-6-CB
Manage Command Competition Advocate	0.05	ACT-6-CD

This example uses Full Time Equivalents (FTEs). Other potential “drivers” could be manhours or percentages.

5. The ABC model calculates activity costs based on the driver assignments in the model

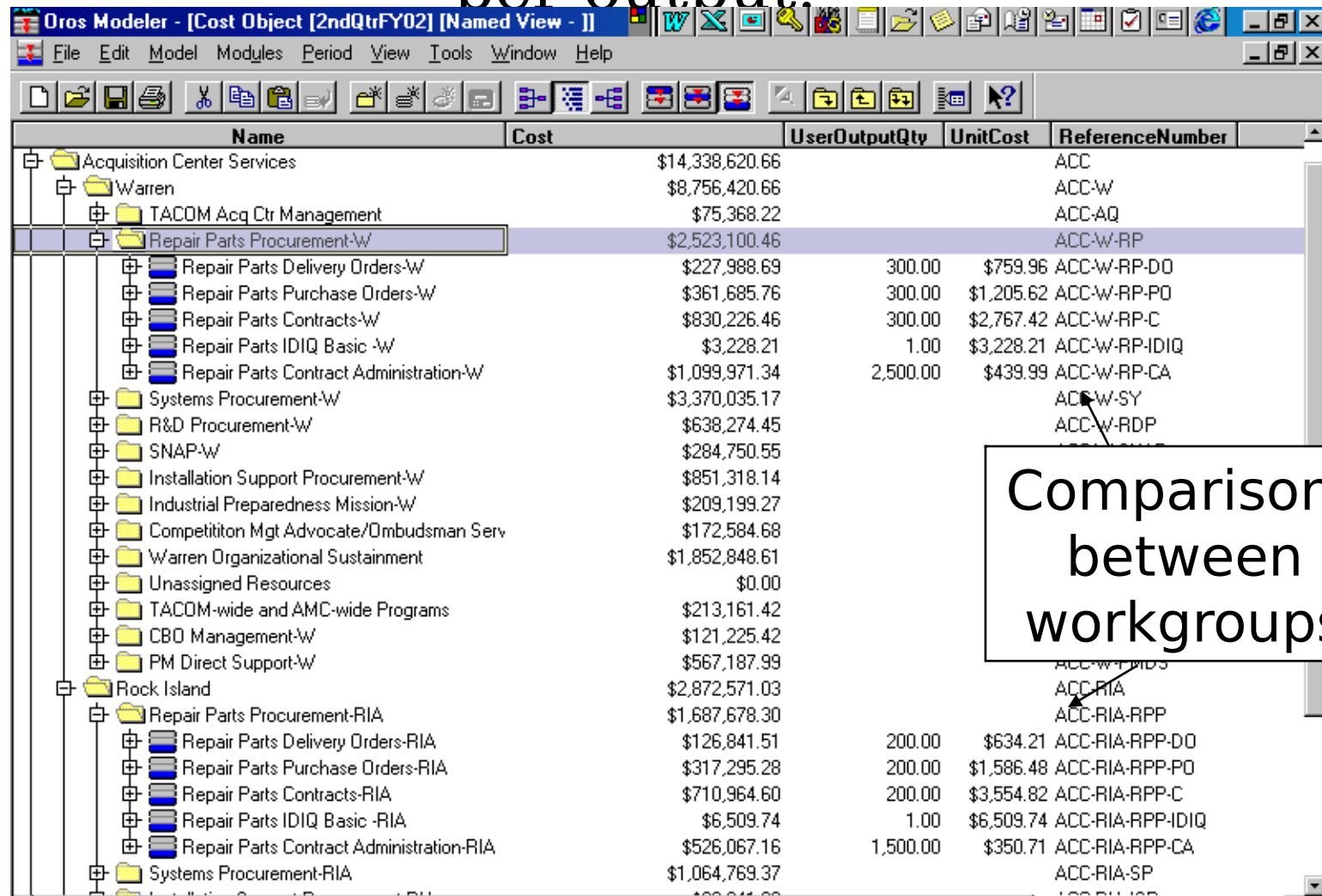


The screenshot shows the Oros Modeler software interface. The title bar reads "Oros Modeler - [Activity [2ndQtrFY02] [Named View -]]". The menu bar includes File, Edit, Model, Modules, Period, View, Tools, Window, and Help. The toolbar contains various icons for file operations and modeling. The main window displays a hierarchical tree on the left and a table on the right.

Name	Cost	ReferenceNumber	UserOutputQty	Activity Number
Activity	\$14,338,620.66			
Process Summary	\$14,338,620.66	80		
Processes - Warren	\$8,756,420.66	ACT-W		
Major Procurement Processes - WARREN	\$5,427,770.66	ACT-MP-W		
Repair Parts Procurement - WARREN	\$1,540,063.41	ACT-RE-W		
Plan Acquisition/Solicit Offers for Repair P	\$495,987.59	ACT-1-RE-W		
Receive/Evaluate Offers and Award PWC	\$485,443.71	ACT-2-RE-W		
Administer Repair Parts Contracts	\$558,632.11	ACT-3-RE-W		
Systems Acquisition Procurement - WARREN	\$2,804,556.05	ACT-SY-W		
R&D Procurement - WARREN	\$425,381.66	ACT-RD-W		
Installation Support Procurement - WARREN	\$439,504.97	ACT-IS-W		
SNAP	\$218,264.57	ACT-SN-W		
Manage Acquisition Center	\$1,821,059.38	ACT-4-W		
Maintain Procurement Systems/Infrastructure	\$637,732.80	ACT-4-1-W		
Analyze & Improve Procurement Mission	\$261,514.02	ACT-4-2-W		
Perform Mgt & Admin Responsibilities	\$656,375.14	70		
Sustain Business	\$265,437.43	ACT-4-4-W		
Develop and Revitalize Workforce	\$958,841.76	ACT-5-W		
Attend Training	\$509,770.06	ACT-5-1-W		
Conduct In-house Training	\$11,539.22	ACT-5-2-W		
Develop and Revitalize Workforce	\$437,532.49	ACT-5-3-W		
Other Mission Activities	\$548,748.85	ACT-6-W		
Unassigned Resources-Warren	\$0.00	ACT Unassigned_W		
Processes - RIA	\$2,863,300.00	ACT-R		
Processes - PICA	\$2,718,900.00	ACT-P		

The bottom of the window shows a taskbar with the Start button and several open applications: Inbox - Mi..., Address..., Microsoft..., Final Listi..., Microsoft..., and Oros M... The system clock in the bottom right corner shows 12:04 PM.

7. The model calculates “average” cost per output.



Oros Modeler - [Cost Object [2ndQtrFY02] [Named View -]]

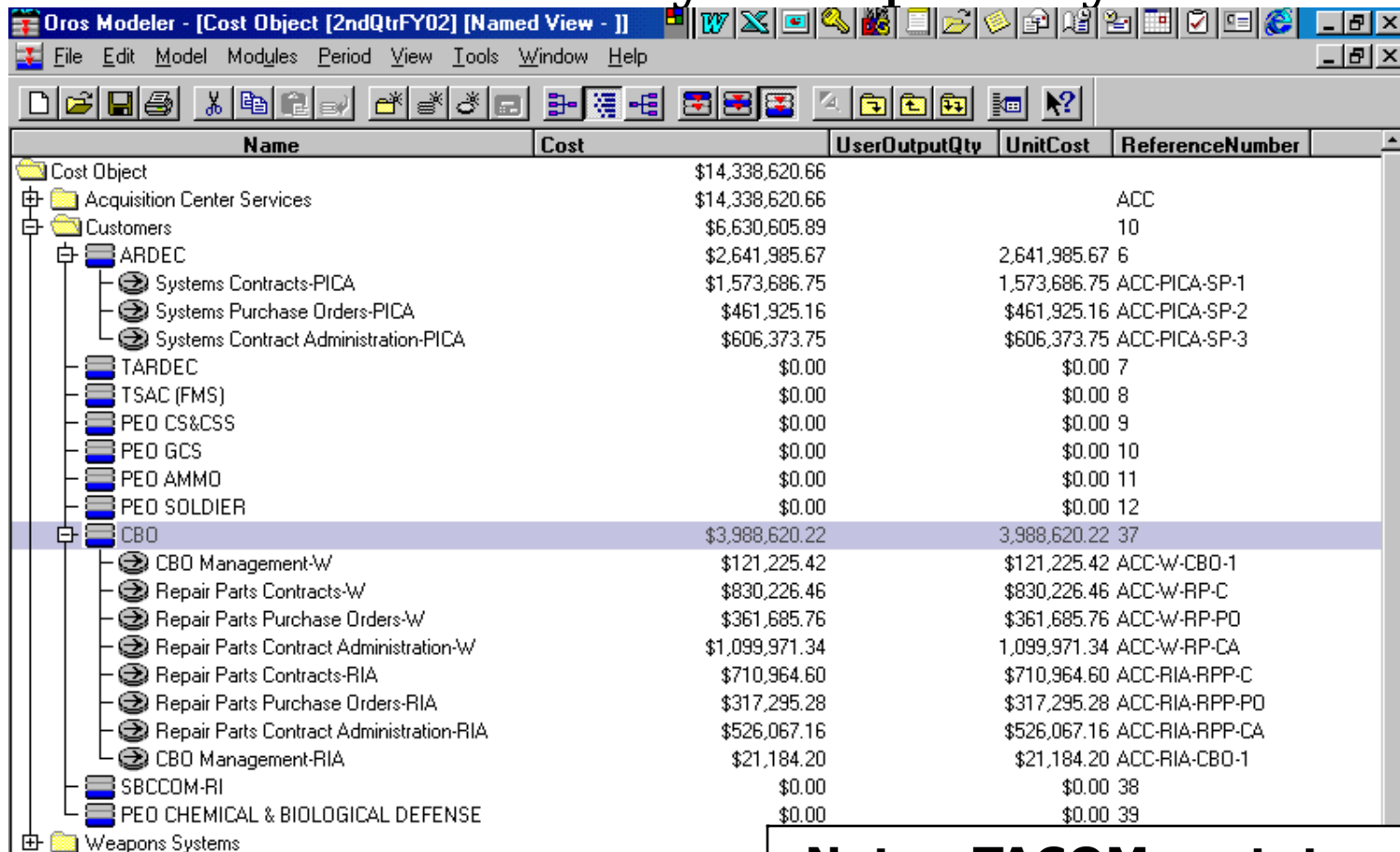
File Edit Model Modules Period View Tools Window Help

Name	Cost	UserOutputQty	UnitCost	ReferenceNumber
Acquisition Center Services	\$14,338,620.66			ACC
Warren	\$8,756,420.66			ACC-W
TACOM Acq Ctr Management	\$75,368.22			ACC-AQ
Repair Parts Procurement-W	\$2,523,100.46			ACC-W-RP
Repair Parts Delivery Orders-W	\$227,988.69	300.00	\$759.96	ACC-W-RP-DO
Repair Parts Purchase Orders-W	\$361,685.76	300.00	\$1,205.62	ACC-W-RP-PO
Repair Parts Contracts-W	\$830,226.46	300.00	\$2,767.42	ACC-W-RP-C
Repair Parts IDIQ Basic -W	\$3,228.21	1.00	\$3,228.21	ACC-W-RP-IDIQ
Repair Parts Contract Administration-W	\$1,099,971.34	2,500.00	\$439.99	ACC-W-RP-CA
Systems Procurement-W	\$3,370,035.17			ACC-W-SY
R&D Procurement-W	\$638,274.45			ACC-W-RDP
SNAP-W	\$284,750.55			
Installation Support Procurement-W	\$851,318.14			
Industrial Preparedness Mission-W	\$209,199.27			
Competition Mgt Advocate/Ombudsman Serv	\$172,584.68			
Warren Organizational Sustainment	\$1,852,848.61			
Unassigned Resources	\$0.00			
TACOM-wide and AMC-wide Programs	\$213,161.42			
CBO Management-W	\$121,225.42			
PM Direct Support-W	\$567,187.99			
Rock Island	\$2,872,571.03			
Repair Parts Procurement-RIA	\$1,687,678.30			
Repair Parts Delivery Orders-RIA	\$126,841.51	200.00	\$634.21	ACC-RIA-RPP-DO
Repair Parts Purchase Orders-RIA	\$317,295.28	200.00	\$1,586.48	ACC-RIA-RPP-PO
Repair Parts Contracts-RIA	\$710,964.60	200.00	\$3,554.82	ACC-RIA-RPP-C
Repair Parts IDIQ Basic -RIA	\$6,509.74	1.00	\$6,509.74	ACC-RIA-RPP-IDIQ
Repair Parts Contract Administration-RIA	\$526,067.16	1,500.00	\$350.71	ACC-RIA-RPP-CA
Systems Procurement-RIA	\$1,064,769.37			ACC-RIA-SP

Comparisons
between
workgroups

Note: Numbers are
notional

8. Costs can further be identified by Customer and by Weapon System



The screenshot shows the Oros Modeler software interface. The title bar reads "Oros Modeler - [Cost Object [2ndQtrFY02] [Named View -]". The menu bar includes File, Edit, Model, Modules, Period, View, Tools, Window, and Help. Below the menu bar is a toolbar with various icons. The main window displays a hierarchical tree on the left and a data table on the right.

Name	Cost	UserOutputQty	UnitCost	ReferenceNumber
Cost Object	\$14,338,620.66			
Acquisition Center Services	\$14,338,620.66			ACC
Customers	\$6,630,605.89			10
ARDEC	\$2,641,985.67	2,641,985.67	6	
Systems Contracts-PICA	\$1,573,686.75	1,573,686.75		ACC-PICA-SP-1
Systems Purchase Orders-PICA	\$461,925.16	\$461,925.16		ACC-PICA-SP-2
Systems Contract Administration-PICA	\$606,373.75	\$606,373.75		ACC-PICA-SP-3
TARDEC	\$0.00	\$0.00	7	
TSAC (FMS)	\$0.00	\$0.00	8	
PEO CS&CSS	\$0.00	\$0.00	9	
PEO GCS	\$0.00	\$0.00	10	
PEO AMMO	\$0.00	\$0.00	11	
PEO SOLDIER	\$0.00	\$0.00	12	
CBO	\$3,988,620.22	3,988,620.22	37	
CBO Management-W	\$121,225.42	\$121,225.42		ACC-W-CBO-1
Repair Parts Contracts-W	\$830,226.46	\$830,226.46		ACC-W-RP-C
Repair Parts Purchase Orders-W	\$361,685.76	\$361,685.76		ACC-W-RP-PO
Repair Parts Contract Administration-W	\$1,099,971.34	1,099,971.34		ACC-W-RP-CA
Repair Parts Contracts-RIA	\$710,964.60	\$710,964.60		ACC-RIA-RPP-C
Repair Parts Purchase Orders-RIA	\$317,295.28	\$317,295.28		ACC-RIA-RPP-PO
Repair Parts Contract Administration-RIA	\$526,067.16	\$526,067.16		ACC-RIA-RPP-CA
CBO Management-RIA	\$21,184.20	\$21,184.20		ACC-RIA-CBO-1
SBCCOM-RI	\$0.00	\$0.00	38	
PEO CHEMICAL & BIOLOGICAL DEFENSE	\$0.00	\$0.00	39	
Weapons Systems				

Note: Numbers are notional

Note: TACOM prototype model did not fully complete these assignments.

9. Sample Report - Activity Contributions to "Repair Parts Contracts"

Note: This report shows the "fully-burdened" cost of repair parts contracts, including indirect and overhead activities.				
Repair Parts Purchase Orders-W				
Output ():				
Receive/Evaluate Offers and Award PWD				
Plan Acquisition/Solicit Offers for Rep				
Recruitment & Workforce Development-W				
Management and Administrative Support-W				
Maintain Procurement Systems/Infrastructure				
Analyze & Improve Procurement Mission				
Business Sustainment-W	->	ACC-W-OS-3 C		
TACOM-wide and AMC-wide Programs	->	ACC-W-T C		
UnAssigned Resources	->	ACC-W-UR-1 C		
Total Cost				
Total Bill of Costs				
Total Entered and Assigned Cost				
Repair Parts Contracts-W				
Output ():				
Plan Acquisition/Solicit Offers for Rep	->	ACT-1-RE-W A		
Receive/Evaluate Offers and Award PWD	->	ACT-2-RE-W A		
Recruitment & Workforce Development-W	->	ACC-W-OS-1 C		
Management and Administrative Support-W	->	ACC-W-OS-2 C		
Analyze & Improve Procurement Mission	->	ACT-4-2-W A		
Business Sustainment-W	->	ACC-W-OS-3 C		
TACOM-wide and AMC-wide Programs	->	ACC-W-T C		
Maintain Procurement Systems/Infrastructure	->	ACT-4-1-W A		
UnAssigned Resources	->	ACC-W-UR-1 C		
Total Cost				
Total Bill of Costs				
Total Entered and Assigned Cost				

Note: Numbers are notional

10. Sample Report - Resource Contributions to “Repair Parts Contracts”

Oros Modeler - [Resource Contributions]				
File Edit Model Modules Period View Tools Window Help				
Name	Ref No	Module	Actl Cost	Actl %
Repair Parts Contracts-W	ACC-W-RP-C	C	\$830,226.46	100.00%
Attribute: AQ			\$28,880.10	3.48%
All Non-Labor Costs, Warren Acq Ctr	AQ-W-NONLABOR	R	\$20,115.75	2.42%
AQ front office & Deputy for Contracting	WG-AQ FRONT OFFR		\$8,764.35	1.06%
Attribute: AQ-X			\$26,884.76	3.24%
Business Mgt Office (Salaries)	WG-AQ-X	R	\$26,884.76	3.24%
Attribute: AQ-AB			\$36,094.79	4.35%
R&D/Base/SNAP Contracting Div (Salaries)	WG-AQ-AB	R	\$34,096.91	4.11%
R&D/Base/SNAP Contracting Div (AMC Intern	WG-AQ-AB-AMC	R	\$1,997.88	0.24%
Attribute: AQ-AM			\$62,982.12	7.59%
Process Mgt Div (Salaries)	WG-AQ-AM	R	\$62,982.12	7.59%
Attribute: AQ-AD			\$142,999.57	17.22%
Deployment Support Div (Salaries)	WG-AQ-AD	R	\$136,837.57	16.48%
Deployment Support Div (AMC Interns)	WG-AQ-AD-AMC	R	\$6,138.21	0.74%
Deployment Support Div (Military)	WG-AQ-AD-MIL	R	\$23.78	0.00%
Attribute: AQ-AH			\$183,559.03	22.11%
Heavy Combat Div (Salaries)	WG-AQ-AH	R	\$171,282.61	20.63%
Heavy Combat Div (AMC Interns)	WG-AQ-AH-AMC	R	\$12,276.42	1.48%
Attribute: AQ-AL			\$112,713.58	13.58%
Light Combat Div (Salaries)	WG-AQ-AL	R	\$111,343.60	13.41%
Light Combat Div (AMC Interns)	WG-AQ-AL-AMC	R	\$1,369.98	0.17%
			\$231,227.68	27.85%
	WG-AQ-AT	R	\$231,227.68	27.85%
	WG-AQ-AT-AMC	R	\$0.00	0.00%
			\$3,029.63	0.36%
	WG-AQ-I	R	\$3,029.63	0.36%
			\$1,855.20	0.22%
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Note: This report shows the “fully-burdened” costs of repair parts contracts, including salaries for “overhead”



Lessons Learned

- ABC estimates **average** costs of processes and outputs
 - Detailed management reports available on workgroup contributions and resource contributions
 - Can be reported by customer and by weapon system
- Relatively simple data collection needed
 - Resource dollars from Resource Management
 - Activity labor hours by spreadsheet (completed by managers). Plan to pursue automated tools.
 - Award counts through systems queries (PADDS, SAACONS, SPS, etc.)



Future of ABC

- Integration of ABC process and data to existing systems
 - AMSAA requirements study
 - Lean Think initiatives
 - Balanced Scorecard
- Expansion of ABC modeling process and AMC standard activity dictionary to all AMC MSCs
- Continued fine-tuning of ABC and Cost Management process